

Set	Items	Description
S1	1598879	VACUUM? ? OR EVACU? OR VACUA? OR NEGATIV?()PRESSUR? OR
AS-		
AIRFL-		PIRAT? OR (AIR OR RESPIR?())(GAS OR GASES OR GASSES) OR
OR -		OW)(5N)(WITHDRAW? OR EVACUAT? OR REMOV? OR PUMP???)(3N)OUT
		SUCTION OR SUCK???)
S2	151937	CHEST OR THORACIC OR THORAX OR INTRATHORA? OR
EXTRATHOR-		
PUL-		AC? OR EXTRATHORAX? OR BRONCH? OR PLEURA? OR LUNG? ? OR
PNEUMO-		M? OR INTRAPLEURA? OR INTRATHORA? OR PNEUMOTHORA? OR
		()THORA? OR PNEUMON? OR RESPIR? OR PLEURODES? OR AIRWAY?
?		
S3	88220	S1(10N)S2
S4	117491	HEART OR HEARTS OR CARDIO? OR CARDIA? OR PULSE OR
HEARTRA-		
		TE? ? OR HEARBEAT? OR ATRI?? OR VENTRIC? OR CORONARY OR
BLOOD-		()(CIRCULATION OR PRESSURE) OR CIRCULATORY OR VASCULA? OR
MYO-		
		CARD?
S5	6665	S3(20N)S4
S6	1791	S5/2005:2010
S7	4874	S5 NOT S6
S8	392057	ENHANC? OR AUGMENT? OR ELEVATE? ? OR ELEVATI? OR
HEIGHTEN?		
		OR INCREAS? OR INTENSIF? OR MAGNIFY OR RAISE? ? OR
RAISING OR		
		REINFORC? OR STRENGTHEN? OR STRONGER OR BOOST???
S9	11216	S4(10N)S8
S10	355	S7(40N)S9
S11	161	RD (unique items)

? show files

File 155:MEDLINE(R) 1950-2010/Feb 26  
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File 5:Biosis Previews(R) 1926-2010/Feb W3  
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File 457:The Lancet 1992-2010/Feb W2  
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11/3,K/5 (Item 5 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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15651724 PMID: 12947026

**Stretch activates nitric oxide production in pulmonary vascular endothelial cells in situ.**

Kuebler Wolfgang M; Uhlig Ulrike; Goldmann Torsten; Schael Gregor; Kerem Alexander; Exner Kay; Martin Christian; Vollmer Ekkehard; Uhlig Stefan  
Division of Pulmonary Pharmacology, Research Center Borstel, Borstel, Germany.  
American journal of respiratory and critical care medicine ( United States ) Dec 1 2003 ,  
168 (11) p1391-8 , ISSN: 1073-449X--Print **Journal Code:** 9421642

Publishing Model Print-Electronic

**Document type:** In Vitro; Journal Article; Research Support, Non-U.S. Gov't

**Languages:** ENGLISH

**Main Citation Owner:** NLM

**Record type:** MEDLINE; Completed

...oxide (NO) by the endothelial nitric oxide synthase (eNOS) in two different models of vascular stretch in the intact lung: In isolated-perfused rat lungs, **vascular** stretch was induced by **elevation of vascular** pressure. In situ digital fluorescence microscopy revealed stretch-dependent NO production, which was localized to capillary endothelial cells and inhibited by NOS blockers. In isolated-perfused mouse **lungs**, **vascular** stretch was generated by ventilation with **elevated negative pressure**. Stretch-induced phosphorylation of Akt and eNOS in **lung** endothelial cells was demonstrated by immunohistochemistry and increased NO production by in situ fluorescence microscopy. Stretch-induced endothelial responses in both models were abrogated by... (

11/3,K/8 (Item 8 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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15206565 **PMID:** 12556262

**Evaluation of a prototypic inspiratory impedance threshold valve designed to enhance the efficiency of cardiopulmonary resuscitation.**

Lurie Keith G; Barnes Thomas A; Zielinski Todd M; McKnite Scott H  
Cardiac Arrhythmia Center, Cardiovascular Division, Department of Medicine,  
University of Minnesota Medical School, Minneapolis 55455, USA.  
lurie002@tc.umn.edu.

Respiratory care ( United States ) Jan 2003 , 48 (1) p52-7 , **ISSN:** 0020-1324--Print

**Journal Code:** 7510357

Publishing Model Print

**Document type:** Journal Article

**Languages:** ENGLISH

**Main Citation Owner:** NLM

**Record type:** MEDLINE; Completed

**OBJECTIVE:** Assess a prototype inspiratory impedance threshold valve (ITV) designed to **enhance** vital organ circulation during standard and active compression/decompression **cardiopulmonary** resuscitation (CPR). **BACKGROUND:** The ITV attaches to commonly used airway assist devices and decreases intrathoracic pressure during the decompression (**chest recoil**) phase of CPR by creating a **vacuum** within the **thorax**, which **increases** venous blood flow to the **heart** and thus **increases** **coronary** perfusion pressure and blood flow to the brain. **METHODS:** The evaluation included laboratory bench testing, according to American Society for Testing and Materials (ASTM) and... (

11/3,K/16 (Item 16 from file: 155)  
DIALOG(R)File 155: MEDLINE(R)  
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13682527 PMID: 10722860

**Effects of positive intrathoracic pressure on pulmonary and systemic hemodynamics.**

Tyberg J V; Grant D A; Kingma I; Moore T D; Sun Y; Smith E R; Belenkie I  
Department of Medicine, University of Calgary, 3330 Hospital Drive NW, Calgary, Canada. jtyberg@ucalgary.ca  
Respiration physiology ( NETHERLANDS ) Feb 2000 , 119 (2-3) p171-9 , ISSN: 0034-5687--Print **Journal Code:** 0047142

Publishing Model Print

**Document type:** Journal Article; Review

**Languages:** ENGLISH

**Main Citation Owner:** NLM

**Record type:** MEDLINE; Completed

...to measure end-diastolic volume directly or to calculate end-diastolic transmural pressure, which requires that pericardial pressure be known. Under most normal circumstances, increased **intrathoracic** pressure (and other interventions, such as vasodilators or lower-body **negative pressure**, that decrease central blood volume) decreases the transmural end-diastolic pressures of both **ventricles**, their end-diastolic volumes and stroke work. However, when ventricular interaction is significant, the effects of these interventions might be quite different; this may be important in patients with **heart** -failure. Although these interventions decrease RV transmural pressure, they may **increase** LV transmural pressure, end-diastolic volume, and thus stroke work by the Frank-Starling mechanism. (

11/3,K/27 (Item 27 from file: 155)  
DIALOG(R)File 155: MEDLINE(R)  
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12271961 PMID: 9389191

**[Improvement of coronary flow by artificial decending the intrathoracic pressure]**

Zhang T; Fu C Y; Huang Z F; Niu X  
Department of Arteriosclerosis, Beijing Heart Lung Blood Vessel Research Center.  
Sheng li xue bao - Acta physiologica Sinica ( CHINA ) Jun 1996 , 48 (3) p307-10 , ISSN: 0371-0874--Print **Journal Code:** 20730130R

Publishing Model Print

**Document type:** English Abstract; Journal Article

**Languages:** CHINESE

**Main Citation Owner:** NLM

**Record type:** MEDLINE; Completed

In simulating the changes of intrathoracic pressure during deep inhalation, the

**intrathoracic** pressure was descended by repeated **aspiration** from **thoracic** cavity in 8 dogs. The volume of **coronary** flow was observed simultaneously. It was found that when intrathoracic pressure was dropping the **coronary** flow volume showed an **increase** as a result of decrease of right **atrium** pressure and **increase** of aorta pressure, thus creating an **increased** pressure difference between inflow and outflow of **coronary** circulation. (

11/3,K/28 (Item 28 from file: 155)  
DIALOG(R)File 155: MEDLINE(R)  
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12136036 PMID: 8901719

**Negative-pressure ventilation improves cardiac output after right heart surgery.**

Shekerdemian L S; Shore D F; Lincoln C; Bush A; Redington A N  
Department of Pediatrics, Royal Brompton Hospital, London, UK.  
Circulation ( UNITED STATES ) Nov 1 1996 , 94 (9 Suppl) pii49-55 , ISSN: 0009-7322--Print **Journal Code:** 0147763  
Publishing Model Print

**Document type:** Journal Article; Research Support, Non-U.S. Gov't

**Languages:** ENGLISH

**Main Citation Owner:** NLM

**Record type:** MEDLINE; Completed

...positive-pressure ventilation and after 15 minutes of negative-pressure ventilation. Negative-pressure ventilation improved the cardiac output by a mean of 46% (P = .005). **Heart** rate did not change, and stroke volume **increased** by a mean of 48.5% (P = .005). Mixed venous saturation increased by 4.6% (P < .02), and consequently arteriovenous oxygen content difference fell significantly (P = .01). The systemic and **pulmonary vascular** resistances were reduced significantly during **negative-pressure** ventilation (P < .05 and P < .03, respectively). **CONCLUSIONS:** Negative-pressure ventilation improves **cardiac** output in children after total cavopulmonary connection and tetralogy of Fallot repair and may prove to be an important therapeutic option in children with the... (

11/3,K/49 (Item 49 from file: 155)  
DIALOG(R)File 155: MEDLINE(R)  
(c) format only 2010 Dialog. All rights reserved.

07549335 PMID: 6472966

**Effect of pneumothorax-induced systemic blood pressure alterations on the cerebral circulation in newborn dogs.**

Batton D G; Hellmann J; Nardis E E

Pediatrics ( UNITED STATES ) Sep 1984 , 74 (3) p350-3 , ISSN: 0031-4005--Print  
Journal Code: 0376422

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...to 10 seconds) of air to reduce mean arterial blood pressure to half of base-line levels.

Both methods of pneumothorax induction resulted in significant **elevations** of central venous pressure and intrapleural pressure, whereas mean arterial blood pressure and cerebral blood velocity decreased significantly. In each group, the pneumothorax was **evacuated** either by slow **withdrawal of air** (10 cc/kg/min) or as rapidly as possible. Rapid evacuation of air resulted in an immediate **increase** in mean arterial **blood pressure** and cerebral blood velocity to supranormal levels. Slow evacuation led to a more gradual normalization of mean arterial **blood pressure** and cerebral blood velocity. It is suggested that the precipitous **increases** in mean arterial **blood pressure** and cerebral blood velocity following rapid **evacuation** of a tension **pneumothorax** may account for the observed association between pneumothorax and intraventricular hemorrhage in premature infants. (

11/3,K/49 (Item 49 from file: 155)

DIALOG(R)File 155: MEDLINE(R)

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07549335 PMID: 6472966

**Effect of pneumothorax-induced systemic blood pressure alterations on the cerebral circulation in newborn dogs.**

Batton D G; Hellmann J; Nardis E E

Pediatrics ( UNITED STATES ) Sep 1984 , 74 (3) p350-3 , ISSN: 0031-4005--Print

Journal Code: 0376422

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

...to 10 seconds) of air to reduce mean arterial blood pressure to half of base-line levels.

Both methods of pneumothorax induction resulted in significant **elevations** of central venous pressure and intrapleural pressure, whereas mean arterial blood pressure and cerebral blood velocity decreased significantly. In each group, the pneumothorax was **evacuated** either by slow **withdrawal of air** (10 cc/kg/min) or as rapidly as possible. Rapid evacuation of air resulted in an immediate **increase** in mean arterial **blood pressure** and cerebral blood velocity to supranormal levels. Slow evacuation led to a more gradual normalization of mean arterial **blood pressure** and cerebral blood velocity. It is suggested that the precipitous **increases** in mean arterial **blood pressure** and cerebral blood velocity following rapid **evacuation** of a tension **pneumothorax** may

account for the observed association between pneumothorax and intraventricular hemorrhage in premature infants. (

11/3,K/75 (Item 21 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
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0001801032 **Biosis No.:** 19674800085038

**An evaluation of the negative phase of a volume-limited ventilator**

**Author:** AUCHINCLOSS J HOWLAND; GILBERT ROBERT

**Author Address:** Upstate Med. Center, State Univ. N. Y., Syracuse, N. Y., USA

**Journal:** AMER REV RESP DE 95 ( 1 ) : p 66-72 1967 1967

**Document Type:** Article

**Record Type:** Abstract

**Language:** Unspecified

**Abstract:** Eight seriously ill patients, requiring mechanical aid to ventilation and presenting problems in maintenance of **blood pressure** of varying degrees of severity, were studied by determining the effect of imposition of **negative pressure** during the expiratory phase of **respiration** on **cardiac** output while ventilation was maintained at constant levels. Peak negative values of 4 to 15 cm of water were achieved. **Increase** in **cardiac** output was observed in only one instance. The use of the negative phase in the type of clinical material studied is considered lacking in critical...

11/3,K/80 (Item 26 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
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0001120109 **Biosis No.:** 19613600030017

**An improved heart-lung preparation ventilated by negative pressure**

**Author:** SHEEHAN WILLIAM L; KINZIE WILLIAM B; WESTBROOK KENNETH L; SPENCER WILLIAM A ; HOFF HEBBEL E

**Author Address:** Baylor U., Houston, Texas

**Journal:** JOUR APPL PHYSIOL 16 ( 1 ) : p 186-190 1961 1961

**Document Type:** Article

**Record Type:** Abstract

**Language:** Unspecified

**Abstract:** Five isolated canine **heart-lung** preparations were successfully ventilated with intermittent **negative pressure** in a specially constructed chamber. Improved **cardiopulmonary** dynamics resulted in **increased** survival time and improved

performance of all preparations. Results obtained with these preparations exceed most of the others reported in the literature. ABSTRACT AUTHORS: Authors

11/3,K/81 (Item 27 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
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0001107004 Biosis No.: 19613600016911

**Hemodynamic effects of continuous positive and negative pressure breathing in normal man**

**Author:** KILBURN KAYE H; SIEKER HERBERT O

**Author Address:** Duke U Sch. Med., Durham, N. C.

**Journal:** CIRCULATION RES 8 ( 3 ): p 660-669 1960 1960

**Document Type:** Article

**Record Type:** Abstract

**Language:** Unspecified

**Abstract:** ...in central blood volume were made by the dye dilution method, by measurement of lung blood density albumin, and by the determination of change in pulmonary vein and heart size. **Negative pressure** breathing at -20 to -22 cm H<sub>2</sub>O **increased cardiac** index from 2.6 to 3.4 l/min./m<sup>2</sup> and at -12 to -14 cm H<sub>2</sub>O from 2.8 to 4.0 l/min./m<sup>2</sup>. The change was the result of an **increase** in stroke volume or **heart** rate. No significant **increase** in central blood volume could be determined by the quantitative methods used, but the heart and pulmonary veins increased in size. Positive pressure breathing caused...

11/3,K/84 (Item 30 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
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0000802018 Biosis No.: 19542800025782

**The effect of positive and negative pressure respiration on unilateral pulmonary blood flow in the open chest**

**Author:** ANKENY J L; HUBAY C A; HACKETT P R; HINGSON R A

**Author Address:** Western Res. U., Cleveland

**Journal:** SURG GYNECOL AND OBSTET 98 ( 5 ): p 600-606 1954 1954

**Document Type:** Article

**Record Type:** Abstract

**Language:** Unspecified

**Abstract:** In the open chest, positive pressure lung inflation interferes with circulation. This depression of the circulation under the conditions of the expt. is due to **increased**



**pulmonary vascular** resistance. **Negative pressure lung** deflation does not **augment** the circulation in the open **chest** as has been observed in the intact chest. The pressure profile which least interferes with circulation should be 1/3 positive pressure with an abrupt...

11/3,K/92 (Item 38 from file: 5)

DIALOG(R)File 5: Biosis Previews(R)

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0000140734 **Biosis No.:** 19290300006296

**Negative pressure pulmonary ventilation in the heart lung preparation**

**Author:** DALY I de BURGH

**Journal:** JOUR PHYSIOL 63 ( (1) ): p 81-93 1927 1927

**Document Type:** Article

**Record Type:** Abstract

**Language:** Unspecified

**Abstract:** The closed circuit **heart-lung** preparation previously described by the author is ventilated by a **negative pressure** apparatus. In confirmation of Mollgaard's experiments on the whole animal it is found that a reduction in the mean intrathoracic pressure **increases** the total output of the **heart**. Intrathoracic pressures down to 400 mm. Hg are not injurious to the heart. The factors determining the mean venous pressure under the experimental conditions are ...

11/3,K/112 (Item 19 from file: 73)

DIALOG(R)File 73: EMBASE

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0070029937 **EMBASE/MEDLINE No:** 1974029974

**Effect of negative pressure breathing on lung compliance**

Goldberg H.; Menkes H.; Ball W.; et-al

Johns Hopkins Univ., Baltimore, Md. 21205, United States

**Corresp. Author/Affil.:** : Johns Hopkins Univ., Baltimore, Md. 21205, United States

Federation Proceedings ( FED. PROC. ) December 1, 1973 , 32/3 (1)

**CODEN:** FEPR A **ISSN:** 0014-9446

**Document Type:** Journal **Record Type:** Abstract

**Language:** English

During negative pressure breathing there is an **increase** in arterial **blood pressure** relative to pleural pressure. This represents an **increased** afterload on the left **ventricle**, which leads to an **increase** in the transmural pressure of the left **atrium**, an **increase** in pulmonary venous pressure, and pulmonary congestion. Pulmonary congestion is associated with a decrease in **lung** compliance. In 5 normal subjects breathing at **negative pressures** of -10 to -30 mm Hg, a fall in compliance was observed of 17%-37%

occurring within 10 seconds after exposure to the negative... ..The transient changes in venous return during negative pressure breathing have been shown to be small and are considered unrelated to the observed changes in **lung** compliance. It is believed that the fall in compliance during **negative pressure** breathing is related to the **pulmonary** congestion caused by an **increased** afterload on the left **ventricle**.

11/3,K/119 (Item 7 from file: 972)  
DIALOG(R)File 972: EMBASE  
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0035742044 **EMBASE/MEDLINE No:** 2008986025C  
**The use of suction in clinical medicine**

Rosen M.; Hillard E.K.  
Dept. of Anaesth., Roy. Infirm., Cardiff, S. Wales  
**Corresp. Author/Affil:** Rosen M.; Dept. of Anaesth., Roy. Infirm., Cardiff, S. Wales

British journal of anaesthesia ( Brit. J. Anaesth. ) December 1, 1960 , 32/10 (486-504)  
**ISSN:** 0007-0912  
**Document Type:** Journal ; Article **Record Type:** Abstract  
**Language:** English **Summary language:** English

...a result, the lung volume is reduced and massive atelectasis may occur. The pressure in the trachea, bronchi, and alveoli may become negative. This produces **increased** venous return and dilation of great veins and the right **heart**, and may be the cause of sudden death during endotracheal suction (with a possible anoxic **heart**). Large **negative pressures** in the **lungs** may be avoided if the suction catheter has an outside diameter of not more than half the inside diameter of the airway, or include a...

11/3,K/124 (Item 12 from file: 972)  
DIALOG(R)File 972: EMBASE  
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0015187087 **EMBASE/MEDLINE No:** 2007224044C  
**Circulatory effects of the body respirator**

Maloney Jr. J.V.; Whittenberger J.L.

American Journal of Medicine ( Amer. J. Med. ) December 1, 1950 , 8/3 (393)  
**ISSN:** 0002-9343  
**Document Type:** Journal ; Article **Record Type:** Abstract  
**Language:** English **Summary language:** English

In clinical and animal experiments it has been found that the **negative-pressure** tank

**respirator** produces impairment of circulation, decreased **cardiac** output, **increase** in cerebral venous and c.s.f. pressure, rise in venous pressure, increased filling of the venous bed and arteriolar constriction.

11/3,K/129 (Item 1 from file: 144)

DIALOG(R)File 144: Pascal

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14376323 PASCAL No.: 00-0028989

Role of breathing on cardiac performance : experimental and mathematical models

Physiology and function from multidimensional images : San Diego CA, 21-23 February 1999

TRAN B Q; HOFFMAN E A

CHIN-TU CHEN, ed; CLOUGH Anne V, ed

Dept. of Biomedical Engineering, Catholic Univ. of America, Washington DC

20064, United States; Dept. of Radiology, Univ. of Iowa, Iowa City, IA 52242, United States

International Society for Optical Engineering, Bellingham WA, United States.; American Association of Physicists in Medicine, Chicago IL, United

States.; American Physiological Society, United States.; Food and Drug Administration, Washington DC, United States.; Society for Imaging Science

and Technology, Springfield VA, United States.; National Electrical Manufacturers Association, Washington DC, United States.; Radiological Society of North America, Oak Brook IL, United States.; Society for Computer Applications in Radiology, Unknown.

Physiology and function from multidimensional images. Conference (San

Diego CA USA) 1999-02-21

Journal: SPIE proceedings series, 1999

, 3660 150-158

Language: English

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... studies using EPI. Results show that positive pressure mechanical ventilation timed to systolic events may increase SV and CO by up to 30%, mainly by **increased** filling of the **ventricles** during diastole. Similarly, **negative pressure** (spontaneous) **respiration** has its greatest effect on **ventricular** diastolic filling. **Cardiac**-gated mechanical ventilation may provide sufficient **cardiac augmentation** to warrant further investigation as a minimally-invasive technique for temporary cardiac assist. Through computational modeling and advanced imaging protocols, we were able to uniquely...

11/3,K/158 (Item 3 from file: 444)  
DIALOG(R)File 444: New England Journal of Med.  
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00109496  
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**Treatment Of Severe Cardiogenic Pulmonary Edema With Continuous Positive  
Airway Pressure Delivered By Face Mask (Original Articles)**

Bersten, Andrew D.; Holt, Andrew W.; Vedig, Alnis E.; Skowronski, George A.;  
Baggoley, Christopher J.  
The New England Journal of Medicine  
Dec 26 , 1991 ; 325 (26),pp 1825-1830  
**Line Count:** 00329      **Word Count:** 04546

**Text:**

...a carbon dioxide tension above 45 mm Hg while receiving oxygen at a rate of 8 liters per minute through a face mask were enrolled. **Cardiogenic** pulmonary edema was diagnosed when the patient had dyspnea of sudden onset, typical findings on a **chest** film, and widespread rales without a history suggesting **pulmonary aspiration** or infection. In most patients the jugular venous pressure was **elevated** and a third **heart** sound was heard. Patients were excluded if they had a diagnosis of myocardial infarction with shock; a systolic blood pressure below 90 mm Hg; severe...